

CLAIMS:

1. A method for creating a static image capable of self-illumination, said method comprising:

5 printing constituent pixels of said image using a light emitting ink on a layer of an organic light emitting diode (OLED) device so as to form a pattern whose contour is determined only by said pixels and does not require pre-shaping of the layer; and
providing a cathode and an anode for applying voltage across the OLED.

2. The method according to claim 1, including:

10 generating half tone color separation masks each corresponding to a respective color component of said pixels and to a neutral background color;

printing the pixels corresponding to the color components using respective light emitting inks; and

printing the pixels corresponding to the neutral background color using an ink that is neither light emitting nor electrically conductive.

15 3. The method according to claim 1 or 2, further including activating a process printer so as to print said color components separately.

4. The method according to any one of claims 1 to 3, wherein a single anode and a single cathode are provided for activating all of said pixels simultaneously thus avoiding a need for separate addressing of selected pixels.

20 5. The method according to any one of claims 1 to 4, wherein said pixels are printed on a PEDOT layer or a cathode of the OLED.

6. The method according to any one of claims 1 to 5, wherein the pixels are formed using different colored light emitting inks.

25 7. The method according to any one of claims 1 to 6, wherein light saturation of selected pixels is varied by depositing a greater thickness of light emitting ink where higher saturation is required.

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8. The method according to any one of claims 1 to 7, wherein said pixels are printed using ink jet technology.

9. The method according to any one of claims 1 to 8, further including processing the image as in conventional printing to effect compensation and/or adjustment of the
5 image.

10. The method according to any one of claims 1 to 9, wherein the processing includes pre-processing the image by screening and dithering.

11. The method according to any one of claims 1 to 10, further including encapsulating the layer having said the pattern printed thereon within a device.

10 12. A device having a static image capable of self-illumination when activated, said device comprising:

constituent pixels of said image printed using a light emitting ink on a layer of an organic light emitting diode (OLED) device so as to form a pattern whose contour is determined only by said pixels and does not require pre-shaping of the layer.

15 13. The device according to claim 12, wherein pixels corresponding to a neutral background color are formed of an ink that is neither light emitting nor electrically conductive.

14. The device according to claim 12 or 13, including a single anode and a single cathode for activating all of said pixels simultaneously without requiring separate
20 addressing of selected pixels.

15. The device according to claim 12 or 13, wherein said pixels are printed on a PEDOT layer or a cathode of the OLED.

16. The device according to any one of claims 12 to 15, wherein the pixels comprise different colored light emitting inks.

25 17. The device according to any one of claims 12 to 16, wherein a thickness of selected ones of said pixels is varied according to a predetermined light saturation to be associated with said selected pixels.

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18. The device according to any one of claims 12 to 17, wherein said pixels are printed using ink jet technology.

19. The device according to any one of claims 12 to 18, being a decorative tile.

20. The device according to any one of claims 12 to 18, being a stained glass 5 window having a single panel on which are printed contiguous areas of light emissive color.

21. The device according to claim 20, further including black lines printed so as to overlap a respective common boundaries between contiguous colored areas.

22. The device according to any one of claims 12 to 18, being a greeting card.

10 23. A decorative tile having a pattern formed on a layer of an OLED.

24. A stained glass panel on which are deposited contiguous areas of light emissive color on a layer of an OLED.

25. The stained glass panel according to claim 24, further including black lines deposited so as to overlap a respective common boundaries between contiguous colored 15 areas.

26. A greeting card having a pattern formed on a layer of an OLED.